

REMARKS

No new matter is added by new claims 30-56 as these claims are supported by the specification as filed, namely the claim and detailed description. In addition, the new independent claims are at least as broad as the cancelled claims.

New claim 30 is directed to a system for supporting a message delivery service. The system features a number of processing servers each coupled to communicate with multiple outbound resources and a database server, over an internal packet-switched data network. Thus, this architecture uses an internal packet-switched network in which outbound resources and a database server communicate with each other. Each server implements a router filter and a message queue, where the message queue is to store request messages received from a customer of the delivery service over an external packet-switched data network. The various elements of this claimed system are now described in additional detail.

Regarding the processing server, this element of the internal packet-switched network contains a queue to store the request messages, where the queue is well understood by those of ordinary skill in the art as an elementary data structure. See the attached Exhibit A from a standard text on computer algorithms, "Introduction to Algorithms" by Thomas H. Cormen, et al., The MIT Press, Eighth printing (1992), chapter 11, pages 200-202.

The message queue is part of a processing server that is coupled to communicate with outbound resources and a database server over an internal packet-switched data network. Such a network has a protocol in which messages are divided into packets



before they are sent. Each packet is transmitted individually and can follow different routes to its destination, be it inside a network or outside of the network. There are various types of packet-switching protocols that are well known. See the printout for two pages of a definition of packet-switching taken from *webopedia.lycos.com*, attached herein as Exhibit B.

In addition, a "network" as understood by those of ordinary skill in the art in the context of this patent application refers to hardware and software data communication system in which there is a multilayer protocol which partitions a network into several modules from a lowest layer to a highest most abstract layer. Many different specifications may exist at each of these layers. It should be noted that networks are often also classified according to their geographical extent (e.g., local area networks, metropolitan area networks, and wide area networks). See a single sheet of a printout taken from the Online Computing Dictionary, attached as Exhibit C.

Finally, the distinction between an internal packet-switched data network and an external packet-switched data network is once again clear to one of ordinary skill in the art, in the context of this patent application, as referring to different security domains. See page 2 of the paper printout of "IT Security Cookbook - Firewalls: Securing External Network Connections" downloaded from *www.boran.com*, attached hereto as Exhibit D. This document discusses the use of a firewall which isolates security domains, so that each external connection to an internal company network is secured to not reduce the security of the internal network. The document also states that every enterprise should have a security policy, and connections to external networks should conform to that policy, once again through the use of a firewall. Thus, the meaning of internal and



external networks in the context of packet-switched data networks is clear.

Having reviewed the understanding of one of ordinary skill in the art of Applicants' system in claim 30, a better appreciation of the advantages provided by such a system can be had. For instance, isolating the processing servers, database server and the outbound resources from an external network promotes security concerns for the internal network. Secondly, the internal network may be expanded somewhat independently of the external network, which aids in scaling the system upwards as additional customers are supported. Note that the request messages are received from a customer over the external packet-switched network, in other words outside of the internal network that contains the elements of the claimed system. Thus, the customer of the service in effect "resides" outside of the internal network. This, of course, is desirable because of the improved security that can be guaranteed for the internal network elements. Applicants respectfully submit that the relied upon reference of U.S. Patent No. 5,406,557 to Baudoin ("Baudoin") does not teach or suggest Applicants' claimed system.

In Baudoin, an electronic communication center is provided that serves as a hub for routing messages. This communication center converts all incoming e-mail messages into a non-user specific standard protocol. Then, based upon the destination address, the center converts from the standard protocol to the appropriate protocol for each destination user. Referring to Fig. 2 now of Baudoin, the communication center system architecture shows **an enterprise 2 that wishes to communicate electronically with entities and users located outside of enterprise 2**. It is this enterprise 2 that may include a timesharing computer, a personal computer 6, or a modem 10 that allows

access by company personnel. Baudoin, column 2 lines 60 to column 3 line 7. Thus, at the outset, Baudoin does not teach or suggest a message delivery service in which messages are received from a customer of the service over an external packet-switched network, where this source for the messages is outside of an internal packet-switched network. Indeed, the "customers" of the communications center of Baudoin are **within** the enterprise 2. Although Fig. 1 of Baudoin shows a remote site that communicates via modem 10, this remote site is merely a representation of a sales office or an employee working at home but still connected to and part of the enterprise 2. Thus, the "customers" of Baudoin are not in an external network, but are rather actually part of the internal network which, in this case, would include the internal communications modules 16. That is because the e-mail communications directed to the internal communication modules 16 are within the network of the enterprise 2, in other words, within an internal network, as compared to the networks which the external communication modules 18 are connected (e.g., value added networks, fax gateway, telex gateway, and the Internet).

Applicants' point here is that the architecture of Baudoin may in effect be viewed as the reverse of Applicants' system in claim 30. Indeed, referring now to Applicants' claim 32, the external data network is the Internet. In contrast, all the e-mails in Baudoin originate from the enterprise 2 and may be directed to the Internet or a value added network, but not originate from them. Applicants respectfully submit that the recitation of the internal and external packet-switched data networks in claim 30 sufficiently distinguishes the architecture of Baudoin which may be viewed as one in which the internal and external networks have been reversed with respect to those



claimed in Applicants' claim 30.

A further distinction between Applicants' claim 30 and the architecture of Baudoin lies in the e-mail hub 14 within the enterprise 2 of Baudoin. The hub has internal communication modules 16 which are connected to the external communication modules 18 via queues, that is the elementary data structures that have been described above. Indeed, Baudoin mentions that an implementation of the e-mail hub 14 is contemplated to be as a single machine or computer, rather than as a network of computers. This is in contrast to Applicants' claimed internal packet-switched network in which the processing servers, the database servers, and the outbound resources communicate with each other. Compare, Baudoin, column 4 lines 35-51.

Although the hub 14 may have the capability to communicate with other similar hubs located at other locations, so that a geographically distributed enterprise may be implemented, once again the purpose of connecting multiple hubs to each other is to realize e-mail connectivity with other entities which do not use a hub, in other words, entities outside of the enterprise. Baudoin, column 3 lines 62 - column 4 line 1 and Fig. 2. Therefore, it is clear that **the architecture in Baudoin is designed to connect users within an enterprise with users outside of or external to an internal network of the enterprise**. Indeed, this is clear when looking at the examples that Baudoin gives regarding the **internal user access alternatives** and the **external link configuration alternatives** in Table 1, featured in columns 8 and 9. The internal user access alternatives are those that are internal to the enterprise 2, while the external link configuration alternatives are those that allow the communication center to deliver a converted e-mail to a recipient outside of the enterprise.

In view of the foregoing, it is respectfully submitted that Baudoin does not teach or suggest Applicants' system in claim 30.

New claim 39 is directed to an article of manufacture for supporting a message delivery system. A machine accessible medium contains data that, when accessed by a machine, cause multiple processing servers to communicate with multiple first outbound resources and a database server, all as part of an internal packet-switched data network. Once again, a message queue is to store request messages received from a customer of the service over an external packet-switched data network. Therefore, for at least some of the reasons given above in support of claim 30, claim 39 is not obvious in view of Baudoin.

In claim 48, a method for supporting a message delivery service is recited. Communication is established with a number of first outbound resources and a database server over an internal packet-switched data network. A request message is obtained from a message queue that stores multiple request messages received from customers of the service, and sent from an external packet-switched data network. A customer associated with this obtained request message is validated after accessing account information in the database server, and a determination is made as to which of the outbound resources this obtained request message should be assigned. Since, in Baudoin, the "customers" are the members of an enterprise 2 that can send e-mail messages that are converted by an e-mail hub and transferred out of the enterprise to the Internet or a value added network outside of the enterprise 2, Baudoin does not teach or suggest Applicants' method for supporting a message delivery service in claim 48.



The new dependent claims are submitted as not being anticipated or obvious at least for the same reasons given in support of their base claims. In addition, with respect to claims 37, 46, and 55, Baudoin does not teach or suggest that the external communication modules 18 of the hub 14 are capable of converting an input request message into a format capable of being played back to a telephone over a telephone network, and wherein a router filter can determine which of two different types of resources to assign the request messages, based on a message type of a request matching the capability of a resource. Baudoin is only concerned with converting e-mails from one e-mail protocol to another e-mail protocol, mentions that a facsimile transmission subsystem may be provided for an external link configuration for transforming an electronic message into a fax transmission, but does not teach or suggest the capability of converting an input request message into a format capable of being played back to a telephone over a telephone network.

Respectfully submitted,

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